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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,311	09/30/2000	Nhon Toai Quach	42390P5727	4002

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EXAMINER

LOHN, JOSHUA A

ART UNIT	PAPER NUMBER
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2184

DATE MAILED: 11/19/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,311

Applicant(s)

QUACH ET AL.

Examiner

Joshua A Lohn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-8, 11-13 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 11-13 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

FINAL REJECTION

Response to Arguments

Applicant's arguments, see page 7, filed 9/23/2003, with respect to 35 USC 112, second paragraph, rejections of claim 1, 6, 11, and 16 have been fully considered and are persuasive. The 35 USC 112 rejection of claims 1, 6, 11, and 16 has been withdrawn.

Applicant's arguments, see page 7, filed 9/23/2003, with respect to 102 rejection in view of Karp et al. (US 5,748,936) have been fully considered and are persuasive. The 102 rejection in view of Karp of claims 1-2, 6-7, 11-12, and 16-17 has been withdrawn.

Applicant's arguments with respect to the 102 rejection in view of Ross as applied to claims 1, 3-4, 6, 8-9, 11, 13-14, 16, and 18-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-8, 11-13, and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ross et al., United States Patent number 5,915,117, published June 22, 1999.

As per claim 1, Ross discloses a method of handling memory errors, in the form of memory exceptions, see column 1, lines 13-16. Ross also discloses receiving and retaining control of a machine from an executing program after an error in memory is detected while executing a memory load request issued by the executing program to retrieve a value from the memory. This is shown in figure 1, where the memory handler controls the flow of instructions during the execution of a load operation initiated by the executing program, see boxes 102-110, where all load requests and any exceptions, or errors, are handled before the load execution is completed by the processor and control is returned to the executing program. Ross discloses receiving a speculative load indication that is true if the memory load request was issued speculatively, the speculative load indicator being provided during compilation, see column 3, lines 49-51. Ross also discloses reading a fault deferral indication that is true if faults can be deferred, the fault deferral indication being set before the error in the memory is detected, the fault deferral indication being the ITLB.ed entry, see column 6, lines 48-50, which is set during compilation, and before any execution based error can occur, see column 9, lines 19-21. If the fault deferral indication is true and the speculative load indication is true, Ross discloses providing an error indication that the returned value from the memory is invalid. This is disclosed in figure 1, where if fault deferral indication, 105, and speculative load indication, 104, are both true the hardware will return a deferred exception indicator in the destination register to indicate the memory value is invalid, 109. Finally, Ross discloses returning control of the machine to the executing program at the point after previous load execution, 111 in figure 1.

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As per claim 2, Ross discloses the error indication is a flag bit associated with the returned value. This is shown in the PSR.ed value that indicates a deferred exception, see column 10, line 66 through column 11, line 25

As per claim 3, Ross discloses the error indication is setting the returned value to an invalid value. This is shown in the return value to the destination register being the deferred exception indicator, which is inherently an invalid memory value to allow it to be an accurate indicator.

As per claims 6-8, the limitations of these claims are the same as those rejected for claims 1-3 above, but in the form of a machine-readable medium. Ross teaches of implementing the methods described above in software, which is a machine-readable medium, see column 1, lines 14-17.

As per claims 11-13, the limitations of these claims are the same as those rejected for claims 1-3 above, but include an interface to receive a value from a memory coupled to the machine. Ross discloses the use of memory loads, which require that an interface exist to receive these values from memory, see column 3, lines 30-35.

As per claims 16-18, the limitations of these claims are the same as those rejected for claims 1-3 above, but including a machine-readable medium executed by the machine. The ability to load from memory indicates that Ross discloses a coupling between memory and the machine executing the invention, see column 3, lines 30-35. Ross discloses this machine executing machine-readable software, see column 1, lines 14-17.

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua A Lohn whose telephone number is (703) 305-3188. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoleil can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

JAL


SCOTT BADERMAN
PRIMARY EXAMINER